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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
WILLOUGHBY, TERRENCE RONIQUE	
ART UNIT	**PAPER NUMBER**
2836	

DATE MAILED: 01/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/777,587	BENCIVENGA ET AL.	
	Examiner	Art Unit	
	Terrence R. Willoughby	2836	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-16 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-16 is/are rejected.

7)☒ Claim(s) 3 and 4 is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 2/12/2004.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Oath/Declaration

1. The oath is defective as it refers to the present application as being Application 09/192,154.

Priority

2. It is noted that this application appears to claim subject matter disclosed in prior Application No. 09/903,213 filed 7/11/01 which is a continuation of 09/192,154 filed 11/13/98. A reference to the prior application must be inserted as the first sentence(s) of the specification of this application or in an application data sheet (37 CFR 1.76), if applicant intends to rely on the filing date of the prior application under 35 U.S.C. 119(e), 120, 121, or 365(c). See 37 CFR 1.78(a). For benefit claims under 35 U.S.C. 120, 121, or 365(c), the reference must include the relationship (i.e., continuation, divisional, or continuation-in-part) of all nonprovisional applications. If the application is a utility or plant application filed under 35 U.S.C. 111(a) on or after November 29, 2000, the specific reference to the prior application must be submitted during the pendency of the application and within the later of four months from the actual filing date of the application or sixteen months from the filing date of the prior application. If the application is a utility or plant application which entered the national stage from an international application filed on or after November 29, 2000, after compliance with 35 U.S.C. 371, the specific reference must be submitted during the pendency of the application and within the later of four months from the date on which the national stage commenced under 35 U.S.C. 371(b) or (f) or sixteen months from the filing date of the

prior application. See 37 CFR 1.78(a)(2)(ii) and (a)(5)(ii). This time period is not extendable and a failure to submit the reference required by 35 U.S.C. 119(e) and/or 120, where applicable, within this time period is considered a waiver of any benefit of such prior application(s) under 35 U.S.C. 119(e), 120, 121 and 365(c). A benefit claim filed after the required time period may be accepted if it is accompanied by a grantable petition to accept an unintentionally delayed benefit claim under 35 U.S.C. 119(e), 120, 121 and 365(c). The petition must be accompanied by (1) the reference required by 35 U.S.C. 120 or 119(e) and 37 CFR 1.78(a)(2) or (a)(5) to the prior application (unless previously submitted), (2) a surcharge under 37 CFR 1.17(t), and (3) a statement that the entire delay between the date the claim was due under 37 CFR 1.78(a)(2) or (a)(5) and the date the claim was filed was unintentional. The Director may require additional information where there is a question whether the delay was unintentional. The petition should be addressed to: Mail Stop Petition, Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

If the reference to the prior application was previously submitted within the time period set forth in 37 CFR 1.78(a), but not in the first sentence(s) of the specification or an application data sheet (ADS) as required by 37 CFR 1.78(a) (e.g., if the reference was submitted in an oath or declaration or the application transmittal letter), and the information concerning the benefit claim was recognized by the Office as shown by its inclusion on the first filing receipt, the petition under 37 CFR 1.78(a) and the surcharge under 37 CFR 1.17(t) are not required. Applicant is still required to submit the reference

in compliance with 37 CFR 1.78(a) by filing an amendment to the first sentence(s) of the specification or an ADS. See MPEP § 201.11.

Specification

3. The abstract of the disclosure is objected to because of the following informalities: On line 3, the letter "a" should be capitalized. Correction is required. See MPEP § 608.01(b).

Claim Objections

4. Claims 3 and 4 are objected as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

5. Regarding claims 3 and 4, the phrase "a like number" renders the claim(s) indefinite because it is unclear how the multi-conductor connector is connected to the data input conductors and if the input conductors are corresponding mating connectors.

Double Patenting

6. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., In re Berg, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); In re Goodman, 11 F.3d 1046, 29

USPQ2d 2010 (Fed. Cir. 1993); In re Longi, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); In re Van Ornum, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); In re Vogel, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and In re Thorington, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

7. Claims 1-11 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-11 of U.S. Patent No. 6,696,270. Although the conflicting claims are not identical, they are not patentably distinct from each other for the following reasons:

Regarding claim 1 of the application and claim 1 of the patent, both claims disclose a data surge protection module for preventing data communication circuits from transient voltage surges comprising: a housing; a printed circuit board; and low impedance ground wire coupled to said printed circuit board and adapted to be coupled to said enclosure whereby one end of said ground terminal plate and said low

impedance ground wire is coupled to said enclosure to provide a ground for said data surge module. The patent additionally recite that the printed circuit board has circuit components for conducting a voltage surge which is necessarily provided by the recited grounding structure common to both the application and patented claims. The patents claim further specifies that the ground terminal plate is rigid and the ground wire is flexible and alternate. It would have been obvious to those skilled in the art at the time the invention was made that the ground plate and the wires be flexible to provide a reliable connection which allows movement and slack between two connection points. The configurations of the wires of the application claim make the wire connection an alternate one. The application claim doesn't specify that the ground terminal plate is coupled at a first end to the circuit board, only that it is connected to the circuit board. It may be interpreted that the point of connection of the grounding terminal plate to the circuit board may be considered to be the first end of the printed circuit board. The application claim further states that the ground terminal plate is adapted for insertion in a grounding strip on an enclosure. Necessarily, the second end of the ground terminal would be connected to the grounding strap adaptive for insertion in a grounding strap on an enclosure is an art recognized equivalent to the recited patent claim which states that the ground terminal plate is coupled to a grounding stud on an enclosure.

Regarding claim 4 of the application and claim 5 of the patent, both claims recite a second multi-conductor connector to a like number of data output conductors; and second multi-pin connector, one second pin for each of said data output conductors, each of said second pins coupled to said printed circuit board whereby the joining of

said second multi-conductor connector and said second multi-pin connector connects said data output conductors to said printed circuit board and said data input conductors.

Regarding claim 5 of the application and claim 4 of the patent, both claims recite a data surge protector module, wherein said first multi-pin connector is a quick connect, quick disconnect connector.

Regarding claim 6, both of the application and the patent claim, recite a data surge protector module, wherein said second multi-pin connector is a quick connect, quick disconnect connector.

Regarding claim 7, both of the application and the patent claim, recite a data surge protector module, wherein said first multi-pin and second multi-pin connectors is quick connect, quick disconnect connectors.

Regarding claim 8, both of the application and the patent claim, recite a data surge protector module, wherein said number of data input conductors is three.

Regarding claim 9 of the application and claim 10 of the patent recite a data surge protector module, wherein said number of data input conductors is six.

Regarding claim 10 of the application and claim 9 of the patent claim, recite a data surge protector module, wherein said number of data output conductors is three.

Regarding claim 11 of the application and of the patent recite a data surge protector module, wherein said number of data output conductors is six.

8. Claims 12-16 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 2-5 of U.S. Patent No. 6,342,998

B1. Although the conflicting claims are not identical, they are not patentably distinct from each other for the following reasons:

Regarding claim 12 of the application and claim 1 of the patent, the claims both recite a data surge protector module comprising: a housing, a printed circuit board within said housing, a first steering bridge on said printed circuit board coupled to a first data input conductor and a first data output conductor and a second data input conductor and a second data output conductor, a second steering bridge on said printed circuit board and a diode coupled across the first and second steering bridge. The application claim does not provide specific detail about the components of the first steering bridge and second steering bridge, however the steering bridge would necessarily have the configuration provided as recited in the patented claims.

Regarding claim 13 of the application and claim 2 of the patent, the claims both recite a second data input conductor is coupled to said first data input conductor and to a grounded shield and said third data output conductor is connected to said grounded shield whereby said data surge protection module is surge protected between said first and second data output conductors and between each of said first and second data input conductors and said third data output conductors.

Regarding claim 14 of the application and claim 3 of the patent, the claims both recite a first fuse in said first data input conductor; and a second fuse in said second data input conductor.

Regarding claim 15 of the application and claim 4 of the patent, the claims both recite a first and second fuse are resettable.

Regarding claim 16 of the application and claim 5 of the patent, the claims both recite a first and second resettable positive temperature coefficient fuses.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. Claims 12-14 are rejected under 35 U.S.C. 102(b) as being anticipated by Carpenter, Jr. (US 4,389,695).

Regarding claim 12, Carpenter discloses the claimed said data surge protection module for protecting data communication circuits from voltage surges (column 1, lines 63-68 and column 2, lines 1-6), comprising: a housing (Fig. 4, 31); a printed circuit board within said housing (Fig.2, 21 column 3, 48-50); a first steering bridge (Fig. 1, 16A-16D) on said printed circuit board to a first data input conductor (Fig. 1, 19A) and a first data output conductor (Fig. 1, 18A) and a second data input conductor (Fig. 1, 19B) and a second data output conductor (Fig. 1, 18B) to direct electrical pulses between said first data input conductor and said second data output conductor (column 2, lines 67-68 and column 3, lines 1-2); a second steering bridge (Fig. 1, 16E-16H) on said printed circuit board coupled to said first steering bridge (Fig. 1) and a third data output conductor (Fig. 1, 14); and a diode coupled (Fig.1, 17A, 17B) across said first and second steering bridges.

Regarding claim 13, Carpenter,Jr. discloses the claimed said data surge protection module, as defined in claim 12, wherein said second data input conductor (Fig. 1, 19B) is coupled to said first data input conductor(Fig. 1, 19A) and to a grounded shield (Fig. 1, 44) and said third data output conductor (Fig. 1, 20) is connected to said ground shield whereby said data surge protection module is surge protected between said first and second data output conductors (Fig. 1, 18A and 18B) and between each of said first and second data output conductors and said third data output conductor (column 2, lines 67-68 and column 3, lines 1-2).

Regarding claim 14, Carpenter,Jr. discloses the claimed said data surge protection module, as defined in claim 13, further comprising: a first fuse (Fig. 1,12A and 13A) in said first data input conductor (Fig. 1, 19A) ; and a second fuse (Fig. 1, 12B and 13B) in said second data input conductor (Fig. 1, 19B).

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carpenter, Jr. (US 4,389,695) as applied to claim 14 above, and in further view of Stygar et al. (US 5,963,121).

Regarding claims 15 and 16, Carpenter,Jr. discloses the claimed said data surge protection module, as defined in claim 14, but does not disclose a resettable first and second fuse.

However, Stygar et al. discloses a resettable fuse being used for resettable electronic circuit protection (Fig. 1) with a positive temperature coefficient (column 1, lines 37-41). It would have been obvious to those skilled in the art at the time the invention was made to have modified the first and second fuses of Carpenter, Jr. data surge protection module by providing a resettable fuse with a positive temperature coefficient (PTC) taught by Stygar et al. to overcome one-time-use standard fuses by having a self-cooling polymer made within the electrical resistance of the material substantially reducing the amount of current which flows through PTC device into the protected data surge protection. Resettable fuses reduce maintenance efforts and costs as the expenses incurred to locate and replace standard fuses is avoided.

12. Claim 1 and 3-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Apa et al. (US 5,563,761) and in view of Auclair (US 5,674,079).

Regarding claim 1, Apa et al. discloses a data surge protection module for protecting data communication circuits from voltage surges (Fig. 2 and 3; column 1, lines 1-2 and column 1, line 16), comprising: a housing (50 and 52); a printed circuit

board (32) within said housing (column 4, lines 9-12); a ground terminal plate (48,90,92) coupled to said printed circuit board (column 4, lines 21-22) Apa et al. does not disclose that the ground terminal plate is adapted for insertion in a grounding strap on an enclosure or a low impedance ground wire coupled to said printed circuit board and adapted to be coupled to said enclosure whereby one of said ground terminal plate and said low impedance ground wire is coupled to said enclosure to provide a ground for said data surge protection module.

However, Auclair discloses a ground wire (Fig.1, 12) being used in a ground lug(Fig.1, 10) for a common ground connection. It would have been obvious to those skilled in the art at the time the invention was made to have provided a grounding wire and a ground lug taught by Auclair to be used with the assembly of Apa et al. In this combination, the ground wire (12) adapted to be coupled to the assembly of Apa et al. through ground lug (10). The enclosure (24,26) of the ground lug provides a ground strap (50) to which the ground terminal plate would be adapted for insertion to ensure a reliable grounding connection of the electrical device by allowing a connection of a grounding wire used for larger devices that can't be grounded by the housing ground plate due to it's dimension in size. It is well known in the art at the time the invention was made to use various grounding attachments to protect electrical voltage surges for complex data communication circuits.

Regarding claim 3, Apa et al. in view of Auclair discloses the claimed said data surge protector module, as defined in claim 1, further comprising: a first multi-conductor connector (34) coupled to a like number of data input conductors (provided in 10); and

multi-pin connector (10), one first pin for each of said data input conductors, each of said first pins coupled to said printed circuit board whereby the joining of said first multi-conductor connector and said first multi-pin connector (10) connects data input conductors to said printed circuit board.

Regarding claim 4, Apa et al. in view of Auclair disclose the claimed said data surge protector module, as defined in claim 3, further comprising second multi-conductor connector (40) coupled to the data output conductors (provided in 12); and a second multi-pin connector (12), but does not disclose a second multi-conductor connector coupled to a like number of data output conducts; however it would have been obvious to those skilled in the art at the time the invention was made that the number of input conductors would be determine by requirements of the system. Furthermore, it has been decided that where the general condition of the claim are disclosed in the prior art, it is not inventive to discover the optimum or workable values by routine experimentation. In re Boesch, 617 F. 2d 272, 205 USPQ 215 (CCPA 1980).

Regarding claims 5 and 6, Apa et al. in view Auclair discloses the claimed said data surge protector module, as defined in claims 3 and 4 above, as the corresponding connectors may be quickly and easily engaged.

Regarding claim 7, Apa et al. in view Auclair discloses the claimed said data surge protector module, as defined in claim 4, wherein both of said first multi-pin and second multi-pin connectors are quick connect, quick disconnect connectors.

Regarding claim 8, Apa et al. in view Auclair discloses the claimed said data surge protector module, as defined in claim 3, but does not disclose that said number of

data input conductors is three. However, it would have been obvious to those skilled in the art at the time the invention was made that the number of input conductors would be determine by requirements of the system. Furthermore, it has been decided that where the general condition of the claim are disclosed in the prior art, it is not inventive to discover the optimum or workable values by routine experimentation. In re Boesch, 617 F. 2d 272, 205 USPQ 215 (CCPA 1980).

Regarding claim 9, Apa et al. in view Auclair discloses the claimed said data surge protector module, as defined in claim 3, but does not disclose that said number of data input conductors is six. However, it would have been obvious to those skilled in the art at the time the invention was made that the number of input conductors would be determine by requirements of the system. Furthermore, it has been decided that where the general condition of the claim are disclosed in the prior art, it is not inventive to discover the optimum or workable values by routine experimentation. In re Boesch, 617 F. 2d 272, 205 USPQ 215 (CCPA 1980).

Regarding claim 10, Apa et al. in view Auclair discloses the claimed said data surge protector module, as defined in claim 8, but does not disclose that said number of data output conductors is three. However, it would have been obvious to those skilled in the art at the time the invention was made that the number of input conductors would be determine by requirements of the system. Furthermore, it has been decided that where the general condition of the claim are disclosed in the prior art, it is not inventive to discover the optimum or workable values by routine experimentation. In re Boesch, 617 F. 2d 272, 205 USPQ 215 (CCPA 1980).

Regarding claim 11, Apa et al. in view Auclair discloses the claimed said data surge protector module, as defined in claim 9, but does not disclose that said number of data output conductors is six. However, it would have been obvious to those skilled in the art at the time the invention was made that the number of input conductors would be determine by requirements of the system. Furthermore, it has been decided that where the general condition of the claim are disclosed in the prior art, it is not inventive to discover the optimum or workable values by routine experimentation. In re Boesch, 617 F. 2d 272, 205 USPQ 215 (CCPA 1980).

13. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Apa et al. (US 5,563,761) in view of Auclair (US 5,674,079) as applied to claim 1 above, and in further view of Tomlinson (US 5,353,189).

Regarding claim 2, Apa et al. in view of Auclair discloses the claimed said data surge protector module, as defined in claim 1, but they both do not disclose a braided low impedance ground wire. However, Tomlinson discloses a braided low impedance ground wire (column 4, lines 2-4 and column 6, lines 53-54) for a surge protection. It would have been obvious to those skilled in the art at the time the invention was made to have modified the grounding wire of the configuration of Apa et al. and Auclair by providing a braided low impendence ground wire taught by Tomlinson to make the grounding wire more flexible and adaptive to be strapped to conductive supports without inducing undesirable currents in them.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Terrence R. Willoughby whose telephone number is 571-272-2725. The examiner can normally be reached on 8-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Sircus can be reached on 571-272-2058. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TRW

PHUONG T. VU
PRIMARY EXAM